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*Sharon E. Bloomquist*  
Sharon E. Bloomquist

<b>APPEAL BRIEF</b>			Docket No. <b>THY002USPT01</b>
Serial No. <b>09/804,769</b>	Filing Date <b>March 13, 2001</b>	Examiner <b>Jeffrey J. Restifo</b>	Group Art Unit <b>3618</b>
Applicant:	<b>Cardinal et al.</b>		
Invention:	<b>CRUISE CONTROL SAFETY DISENGAGEMENT SYSTEM</b>		

**MS Appeal**  
Commissioner for Patents  
P.O. Box 1450  
Alexandria, VA 22313-1450

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**GROUP 3600**

Dear Sir:

This brief is filed on appeal from the decision of the Examiner mailed September 13, 2003 finally rejecting all pending claims in the above-referenced patent application.

This brief is being submitted in triplicate in accordance with 35 C.F.R. 1.192(a), along with the necessary filing fee as set forth in 35 C.F.R. 1.17(c).

**REAL PARTY IN INTEREST**

The real parties in interest in connection with this appeal are the named inventors Thomas W. Cardinal, John C. Thiry, and Daniel K. Westlund as inventor owners of the entire right, title, and interest in the application.

## **RELATED APPEALS AND INTERFERENCES**

Appellant and appellant's legal representative are unaware of any other appeal or interference which will directly affect, be directly affected by, or have a bearing on the Board's decision in the pending appeal.

## **STATUS OF CLAIMS**

The application was filed on March 13, 2001. The application was originally filed with claims 1-17. Claims 1, 11, and 17 were amended in an Amendment & Response mailed on May 31, 2002. Claims 1-17 remain pending in the application. No claims have been allowed.

The rejection of claims 1-17 is appealed. A copy of the claims involved in this appeal is provided in the Appendix section of this Brief in accordance with 37 C.F.R. 1.192(c)(9).

## **STATUS OF AMENDMENTS**

No amendment has been filed subsequent to final rejection of the appealed claims.

## **SUMMARY OF THE INVENTION**

The Present Claimed Invention is directed to a cruise control swerve release system effective for automatically and directly disengaging a cruise control system when a vehicle experiences a threshold value of lateral acceleration indicative of a loss or impending loss of driver control.

## **ISSUES**

Whether claims 1-17 are obvious over Phung et al. (United States Patent No. 6,370,469) in view of Blaney (United States Patent No. 4,522,280).

## GROUPING OF CLAIMS

Rejected claims 1-17 stand or fall together with respect to the obviousness rejection.

## ARGUMENT

### ***Objections/Rejections Under 35 U.S.C. § 103***

**1.0**     *The Examiner has rejected claims 1-17 under 35 U.S.C. 103(a) as unpatentable over Phung et al. in view of Blaney.*

### SUMMARY OF CITED REFERENCES

**Phung et al. (United States Patent No. 6,370, 469)** discloses a cruise control system for a motor vehicle which monitors lateral acceleration and adjusts the torque command value employed by the cruise control system dependant upon a comparison of actual lateral acceleration to predetermined minimum and maximum lateral acceleration limits.

**Blaney (United States Patent No. 4,522,280)** discloses a safety system for automatically disengaging an automotive cruise control system for a motor vehicle whenever a failure or malfunction of the vehicle braking system or cruise control system is detected. One aspect of the safety system compares the vehicle's forward operating speed with a predetermined peak forward operating speed when the "resume" mode of the cruise control system has been actuated and the vehicle is accelerating towards a predetermined cruise control speed. In the event the vehicle's forward operating speed exceeds the predetermined peak forward operating speed, the safety system disengages the cruise control.

### SUMMARY OF CLAIMED INVENTION

**The Present Claimed Invention** is directed to a cruise control swerve release system effective for automatically and directly disengaging a cruise control system when a vehicle

experiences a threshold value of lateral acceleration indicative of a loss or impending loss of driver control.

#### LEGAL BASIS

To establish a *prima facie* case of obviousness, three basic criteria must be met. First, there must be some suggestion or motivation either in the references themselves or in the knowledge generally available to one of ordinary skill in the art, to modify the reference or to combine reference teachings. Second, there must be a reasonable expectation of success. Finally, the prior art reference (or references when combined) must teach or suggest all the claim limitations. The teaching or suggestion to make the claimed combination and the reasonable expectation of success must be found in the prior art, NOT in applicant's disclosure. In re Vaeck, 947 F.2d 488, 20 U.S.P.Q.2d 1438 (Fed. Cir. 1991). See, M.P.E.P. § 2143.

NEITHER PHUNG ET AL. NOR BLANEY  
DISCLOSE EACH AND EVERY ELEMENT  
OF THE CLAIMED INVENTION.

Phung et al. discloses a cruise control system which monitors lateral acceleration and compensates the torque command aspect of the cruise control system based upon a comparison of the sensed lateral acceleration relative to predetermined minimum and maximum lateral acceleration limits. Blaney disconnects a cruise control system when the "resume" mode of the cruise control system has been actuated and the vehicle's forward speed is found to have exceeded a predetermined peak forward speed. The Present Claimed Invention disengages the cruise control system on a vehicle when excessive lateral acceleration is detected. Neither Phung et al. nor Blaney disclose, teach, or suggest a system which disengages the cruise control system on a vehicle when the vehicle experiences a ***lateral acceleration*** which exceeds a threshold value.

The control systems of Phung et al., Blaney and the Present Claimed Invention are substantially different. By way of example, an automobile equipped with the control system of Phung et al. traveling with an activated cruise control which suddenly swerves over a median as the result of an abrupt incapacitation of the driver (*e.g.*, heart attack or seizure) and thereafter

travels a relatively straight path into oncoming traffic, would be initially slowed by the control system based upon detection of the sudden swerve, but would thereafter return control to the cruise control system and allow the vehicle to accelerate towards oncoming traffic. The same automobile equipped with the control system of Blaney would continue to speed towards the oncoming traffic under the influence of the cruise control because the control system of Blaney only disengages the cruise control when the forward speed exceeds a predetermined threshold forward speed. In sharp contrast, the same vehicle equipped with the control system of the Present Claimed Invention would begin to slow down upon detection of the sudden swerve and would continue to slow because the control system deactivates the cruise control as a result of the sudden swerve.

NEITHER PHUNG ET AL. NOR BLANEY  
PROVIDES MOTIVATION TO MODIFY  
THE PRIOR ART SYSTEMS TO ACHIEVE  
THE PRESENT INVENTION

In order to determine the propriety of an obviousness rejection, it is necessary to ascertain whether or not the reference or references motivate one of ordinary skill in the relevant art, having the reference or references before him, to make the proposed substitution, combination, or modification. In re Linter, 458 F.2d 1013, 173 U.S.P.Q. 560, 562 (CCPA 1972). Obviousness can only be established where there is some teaching, suggestion, or motivation in the prior art or in the knowledge generally available to one of ordinary skill in the art, to combine the references and produce the claimed invention. In re Fine, 837 F.2d 1071, 5 U.S.P.Q.2d 1596 (Fed. Cir. 1988); In re Jones, 958 F.2d 347, 21 U.S.P.Q.2d 1941 (Fed. Cir. 1992). *See*, M.P.E.P. §2143.01.

Phung et al. discloses a controller for a cruise control system of a motor vehicle which compensates the torque command aspect of the cruise control system based upon sensed lateral acceleration of the vehicle. Blaney discloses a safety system for automatically disengaging a cruise control system for a motor vehicle whenever a failure or malfunction of the cruise control system is detected, such as detection of a forward operating speed which exceeds a predetermined peak forward operating speed while the "resume" mode of the cruise control system is accelerating the forward operating speed of the vehicle. Neither Phung et al. nor Blaney disclose, teach or suggest

selectively combining Phung et al and Blarney to effect *disengagement* of a cruise control system based upon excessive *lateral acceleration*. The Examiner is employing forbidden hindsight to recreate the Present Claimed Invention. Loctite Corp. v. Ultraseal Ltd., 781 F.2d 861, 873, 228 USPQ 90, 98 (Fed. Cir. 1985).

#### CONCLUSION

Applicant respectfully submits that claims 1-17 are in condition for allowance.

Respectfully submitted,

Date 30 Apr 04

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## APPENDIX

### PENDING CLAIMS

*United States Patent Application  
Serial No. 09/804,769*

1. A system for automatically disengaging a cruise control system on a motorized vehicle when the vehicle experiences a lateral acceleration in excess of a predetermined threshold value, comprising:
  - (a) a sensor mounted upon the vehicle for sensing lateral acceleration of the vehicle; and
  - (b) a controller in direct communication with the sensor and the cruise control system for disengaging the cruise control system when the sensor detects a lateral acceleration in excess of a predetermined threshold value.
2. The system of claim 1 wherein the motorized vehicle is a passenger vehicle.
3. The system of claim 1 wherein the motorized vehicle is a light duty truck.
4. The system of claim 1 wherein the motorized vehicle is a heavy duty truck.
5. The system of claim 1 wherein the motorized vehicle is a semi truck.
6. The system of claim 1 wherein the sensor is an accelerometer.
7. The system of claim 1 wherein the sensor is a pendulum.
8. The system of claim 6 wherein (i) the accelerometer is effective for generating an electrical lateral acceleration signal which is proportional to lateral acceleration experienced by the vehicle, and (ii) the controller is a microcontroller in electrical communication with the accelerometer and the cruise control system effective for

- (A) receiving the electrical lateral acceleration signal from the accelerometer, (B) comparing the value of the lateral acceleration signal to the predetermined threshold value, and (C) effecting disengagement of the cruise control system when the lateral acceleration signal exceeds the predetermined threshold value.
9. The system of claim 1 wherein the controller is a mechanical switch.
  10. The system of claim 7 wherein the controller is a mechanical switch.
  11. A safety system for a motorized vehicle equipped with a cruise control system, comprising:
    - (a) an accelerometer mounted upon the vehicle so as to sense lateral acceleration of the vehicle and generate a lateral acceleration signal having a value proportional to the sensed lateral acceleration; and
    - (b) a controller in direct electrical communication with the accelerometer and the cruise control system for disengaging the cruise control system upon receiving a lateral acceleration signal in excess of a predetermined threshold value.
  12. The system of claim 11 wherein the motorized vehicle is a passenger vehicle.
  13. The system of claim 11 wherein the motorized vehicle is a light duty truck.
  14. The system of claim 11 wherein the motorized vehicle is a heavy duty truck.
  15. The system of claim 11 wherein the motorized vehicle is a semi truck.
  16. The system of claim 11 wherein the controller is a microcontroller.
  17. A method for automatically disengaging a cruise control system on a motorized vehicle when the vehicle experiences a lateral acceleration in excess of a



predetermined threshold value, comprising:

- (a) sensing lateral acceleration of the vehicle; and
- (b) automatically and directly disengaging the cruise control system when the sensor detects a lateral acceleration in excess of a predetermined threshold value.